

b biochem biosci biotech medicine

? e au=krieg, a?

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E18	15	AU=KRIEG, AM*
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E23	1	AU=KRIEG, ARTHUR F
E24	11	AU=KRIEG, ARTHUR F.
E25	58	AU=KRIEG, ARTHUR M

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	1	AU=KRIEG, ARTHUR F
	11	AU=KRIEG, ARTHUR F.
	58	AU=KRIEG, ARTHUR M
s1	295	S E1-E25

? s s1 and internucleotide

295	S1
5451	INTERNUCLEOTIDE

S2 3 S S1 AND INTERNUCLEOTIDE

? e au=samulowitz, u?

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26	S E2-E4

S3

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26	S3
5451	INTERNUCLEOTIDE

S4 2 S S3 AND INTERNUCLEOTIDE

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 E24 3 AU=VOLLMER, JOHN
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S6	1	S S5 AND INTERNUCLEOTIDE

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 562 S7
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? s e1-e4
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 63 S9
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 s10 0 S S9 AND INTERNUCLEOTIDE

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? s s11 and internucleotide

	63	S11
	5451	INTERNUCLEOTIDE
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Processing
Processing

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CpGinternucleotidelinkage.txt

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 E16 4 AU=LIPFORD, JAMES R.
 E17 1 AU=LIPFORD, JODY WOODS
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 E20 3 AU=LIPFORD, KEITH
 E21 2 AU=LIPFORD, L. C.
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 59 AU=LIPFORD, GRAYSON B.
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 165 S14
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S2         3    S S1 AND INTERNUCLEOTIDE
S3        26    S E2-E4
S4         2    S S3 AND INTERNUCLEOTIDE
S5        19    AU='VOLLMER, JORG' FROM 5, 6, 24, 34, 40, 41, 45, 50, 65, 71, 72,
73, 76, 98, 103, 136, 143, 144, 154, 155, 156, 162, 172, 305, 369, 370, 393, 399,
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149, 159, 444
S6         1    S S5 AND INTERNUCLEOTIDE
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S14       165   S E1-E9
S15        1    S S14 AND INTERNUCLEOTIDE
S16        2    S E1-E3

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CpGinternucleotidelinkage.txt

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236 S20
35612 PHOSPHODIESTER
S21 19 S S20 AND PHOSPHODIESTER
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Records from unsupported files will be retained in the RD set.
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22/3,k/1 (Item 1 from file: 399) Links
CA SEARCH(R)
(c) 2008 American Chemical Society. All rights reserved.
```

145291047 CA: 145(15)291047j PATENT
Immunostimulatory oligonucleotides with stabilized internucleotide linkage for
treating cancer, allergy, asthma and infection
Inventor (Author): Krieg, Arthur M.; Samulowitz, Ulrike; Vollmer, Joerg
Location: USA
Assignee: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH
Patent: PCT International ; WO 2006/01915 A2 Date: 20060831
Application: WO 2006/06778 (20060224) *US 2005/0655931 (20050224)
Pages: 93pp.

CODEN: PIXXD2

Language: English

Patent Classifications:

Class: A61K-000/A

Designated Countries: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA
Designated Regional: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

22/3,K/2 (Item 1 from file: 357) Links

Derwent Biotech Res.

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0453110 DBA Accession No.: 2008-11619 PATENT

Novel immunostimulatory oligonucleotide, useful as pharmaceutical for allergic disease e.g. pollen allergy or hepatitis such as viral hepatitis such as type B or hepatitis C and as adjuvant of vaccine pharmaceutical composition comprising oligonucleotide, useful as vaccine for prevention of allergy and hepatitis C virus infection

Author: IWAMURA T; NARUMI H; MASUMOTO H; KANEDA A; SONEDA A; AKIRA S

Patent Assignee: TORAY IND INC; UNIV OSAKA 2007

Patent Number: WO 2007139190 Patent Date: 20071206 WPI Accession No.: 2008-M01182 (200870)

Priority Application Number: JP 200746556 Application Date: 20070227

National Application Number: WO 2007JP61105 Application Date: 20070531

Language: Japanese

Novel immunostimulatory oligonucleotide, useful as pharmaceutical for allergic disease e.g. pollen allergy or hepatitis such as...

Abstract: DERWENT ABSTRACT: NOVELTY - An immunostimulatory oligonucleotide, is new. DETAILED DESCRIPTION - An immunostimulatory oligonucleotide, comprising a nucleotide sequence 5'-(G)MPXCGYQ(G)N-3'. C=cytosine; G=guanosine... ..is 16-37 nucleotides and excludes GGGGGGTGCCGATCGGCAGGG (SEQ ID No. 5). BIOTECHNOLOGY - Preferred Oligonucleotide: The immunostimulatory oligonucleotide containing base sequence having SEQ ID No. 59, has a base sequence of GGGGGGGTGCCGATCGGCAGGG... ..No. 54), and GGGGGGGGCGACGATCGTCG (SEQ ID No. 95) and GGGGGGTGACGATCGTCGGG (SEQ ID No. 97). The immunostimulatory oligonucleotide having SEQ ID No. 60 or 61 has a base sequence of GGGGGGTGCATCGATGCAGGG (SEQ ID No. 30) or GGGGGGGACGACGTCGTCGG (SEQ ID No. 40). The phosphorothioate modification of phosphodiester linkage between a portion and whole nucleotide residue is carried out, preferably at G residue at... ..a dose of 0.1 pmol-10 micronsol, preferably 1 pmol-1 micronsol. EXAMPLE - The immunostimulatory oligonucleotide having SEQ ID No. 1 and SEQ ID No. 5 was produced by the...

E.C. Numbers:

22/3,K/3 (Item 2 from file: 357) Links

Derwent Biotech Res.

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0450953 DBA Accession No.: 2008-09462 PATENT

Novel CpG immunostimulatory oligonucleotide useful for inducing immune response e.g. interferon-alpha induction, treating cancer e.g. breast cancer, and for treating autoimmune disease, airway modeling and viral infection pharmaceutical composition comprising interferon-alpha obtained by gene expression, useful in treatment of cancer, autoimmune disease and virus infection

Author: DEBELAK H; UHLMANN E; JURK M

Patent Assignee: COLEY PHARM GMBH 2008

Patent Number: WO 200868638 Patent Date: 20080612 WPI Accession No.: 2008-J70765
(200856)

Priority Application Number: US 847811 Application Date: 20060927

National Application Number: WO 2007IB4389 Application Date: 20070925

Language: English

Novel CpG immunostimulatory oligonucleotide useful for inducing immune response e.g. interferon-alpha induction, treating cancer e.g...

Abstract: DERWENT ABSTRACT: NOVELTY - An CpG immunostimulatory oligonucleotide, is new. DETAILED DESCRIPTION - An CpG immunostimulatory oligonucleotide comprising R1YZR2, is new. R1,R2=lipophilic substituted nucleotide analog (L), nucleotide or linkage, preferably lipophilic substituted nucleotide analog (L); Y=pyrimidine nucleotide;and Z=purine, pyrimidine or basic... ..oligonucleotide has at least two 5'-ends. The two nucleotides of the oligonucleotide have stabilized linkage. The stabilized linkage is phosphorothioate, phosphorodithioate, methylphosphonate, methylphosphonothioate boranophosphonate, phosphoramidate, or dephospho linkage, either as enantiomeric mixture or as enantiomeric pure S-or R-configuration. The oligonucleotide having the sequence of R1YZR2, in which YZ has phosphodiester linkage or phosphorothioate linkage, R1Y has phosphorothioate linkage, ZR2 has phosphorothioate linkage, and all other nucleotides has phosphorothioate linkage. The oligonucleotide is free of microcarrier or lipid carrier. The oligonucleotide is A, B, C... ..The B class oligonucleotide has the sequence of 5'TCN1TX1X2CGX3X43'. The oligonucleotide comprises 3'-3' linkage or 5'-5' linkage. Preferred Method: The immune induction method further involves an antigen. The treatment method of cancer... ..at a dosage of 0.1 mu g-10 mg. ADVANTAGE - The oligonucleotide provides excellent immunostimulatory effect. EXAMPLE - No suitable example given.(117 pages)
E.C. Numbers:

22/3,K/4 (Item 3 from file: 357) Links

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0448004 DBA Accession No.: 2008-06513 PATENT

New vaccine composition, useful for treating atherosclerosis or for increasing the level of high density lipoprotein-associated cholesterol (HDL-C) in the blood of an individual pharmaceutical composition comprising adjuvant and therapeutic protein, useful as vaccine for treatment of atherosclerosis

Author: RITTERSHAUS C W; THOMAS L J; KRIEG A M

Patent Assignee: COLEY PHARM GROUP INC; AVANT IMMUNOTHERAPEUTICS INC 2008

Patent Number: WO 200857529 Patent Date: 20080515 WPI Accession No.: 2008-G03624
(200838)

Priority Application Number: US 859005 Application Date: 20061106

National Application Number: WO 2007US23353 Application Date: 20071106

Language: English

Abstract: ...portion linked to a helper T cell epitope portion; and (2) an adjuvant comprising an immunostimulatory oligonucleotide. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are: (1) a method of treating atherosclerosis in an individual... ..the vaccine composition or the antigenic hybrid polypeptide and an adjuvant. BIOTECHNOLOGY - Preferred Composition: The immunostimulatory oligonucleotide is a DNA CpG oligonucleotide having at least one unmethylated CpG dinucleotide. The broad... ..oligonucleotide is a T class oligonucleotide. The CpG oligonucleotide comprises at least one 3'-3' linkage. The CpG oligonucleotide comprises at least one 5'-5' linkage. The vaccine composition further comprises a non-nucleotidic brancher moiety. The vaccine composition further comprises... ..least two 5'-ends. At least one nucleotide of the CpG oligonucleotide has a stabilized linkage. The stabilized linkage is phosphorothioate, phosphorodithioate, methylphosphonate, methylphosphonothioate, boranophosphonate, phosphoramidate, or a dephospholinkage. The CG dinucleotide has a phosphorothioate linkage. The CpG oligonucleotide has at least three CG dinucleotides. Each of the at least three CG dinucleotides has a phosphodiester or phosphodiester-like internucleotide linkage, and the oligonucleotide includes at least one stabilized internucleotide linkage. All other nucleotides have a phosphorothioate linkage. All nucleotides of the CpG oligonucleotide have a phosphorothioate linkage. The CpG oligonucleotide is

CpGinternucleotidelinkage.txt

5'TCGTCGTTTTOTCGTTTTGTCGTT3' (SEQ ID NO: 3). The immunostimulatory oligonucleotide is an RNA oligonucleotide. The immunostimulatory oligonucleotide and antigenic hybrid polypeptide are administered simultaneously or sequentially. The composition comprises: (a) an... ..portion linked to a helper T cell epitope portion; and (b) an adjuvant comprising an immunostimulatory oligonucleotide for treating atherosclerosis in an individual. ACTIVITY - Metabolic; Antiarteriosclerotic. No biological data given.MECHANISM...

E.C. Numbers:

22/3,K/5 (Item 4 from file: 357) Links

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0446896 DBA Accession No.: 2008-05405 PATENT

New composition comprising immunostimulatory oligonucleotide and anti-viral agent, useful for treating a cancer, viral or bacterial infection pharmaceutical composition comprising immunostimulatory oligonucleotide, useful in treatment of cancer, virus and bacterium infection

Author: VOLLMER J; JURK M; UHLMANN E; DEBELAK H; BRATZLER R L; VICARI A

Patent Assignee: COLEY PHARM GROUP INC; COLEY PHARM GMBH; COLEY PHARM GROUP LTD 2008

Patent Number: WO 200839538 Patent Date: 20080403 WPI Accession No.: 2008-F00138 (200834)

Priority Application Number: US 847408 Application Date: 20060927

National Application Number: WO 2007US21030 Application Date: 20070927

Language: English

New composition comprising immunostimulatory oligonucleotide and anti-viral agent, useful for treating a cancer, viral or bacterial infection pharmaceutical composition comprising immunostimulatory oligonucleotide, useful in treatment of cancer, virus and bacterium infection

Abstract: DERWENT ABSTRACT: NOVELTY - A composition comprising an immunostimulatory oligonucleotide and an anti-viral agent, where the anti-viral agent is not a C... ..substituted guanosine or an imidazoquinoline and where the anti-viral agent is linked to the immunostimulatory oligonucleotide, is new. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are: (1) a method for treating viral disease... ..composition; (3) a method for screening for molecules containing an anti-viral agent and an immunostimulatory oligonucleotide that have anti-viral activity; (4) a method for treating cancer; and (5) a method for treating bacterial infection. BIOTECHNOLOGY - Preferred Composition: The immunostimulatory oligonucleotide is linked to the anti-viral agent directly. The immunostimulatory oligonucleotide is linked to the anti-viral agent indirectly. The immunostimulatory oligonucleotide and the anti-viral agent are part of the same molecule. The anti-viral... ..is one or more nucleotide analogs. The composition further comprises a nuclease susceptible site between immunostimulatory oligonucleotide and the anti-viral agent. The immunostimulatory oligonucleotide contains at least one 3'-3' or 5'-5' linkage. The composition further comprises a pharmaceutical carrier. The composition is sterile. The anti-viral agent is loxoribine, isatoribine, ribavirin, valopicitabine, BILN 2061, or VX-950. The immunostimulatory oligonucleotide comprises a chimeric backbone, RNA oligonucleotide, or DNA oligonucleotide. The DNA oligonucleotide is an... ..least one unmethylated CpG dinucleotide, where the at least one unmethylated CpG dinucleotide includes a phosphodiester or phosphodiester-like internucleotide linkage, and where the oligonucleotide includes at least one stabilized internucleotide linkage. The DNA oligonucleotide includes at least three unmethylated CpG dinucleotides, where the at least three unmethylated CpG dinucleotides include a phosphodiester or phosphodiester-like internucleotide linkage, and where the oligonucleotide includes at least one stabilized internucleotide linkage. The antiviral agent is linked to an internal nucleotide or to a terminal nucleotide. The... ..5' terminal nucleotide. The composition further comprises a second anti-viral agent formulated with the immunostimulatory oligonucleotide. The second anti-viral agent is linked to the immunostimulatory oligonucleotide. The composition includes a microparticle housing the immunostimulatory oligonucleotide and the anti-viral agents. The composition

includes a liposome housing the immunostimulatory RNA oligonucleotide and the anti-viral agent. The DNA oligonucleotide is not an abasic containing oligonucleotide. The DNA oligonucleotide is not an adapter oligonucleotide. A composition comprises an immunostimulatory RNA oligonucleotide and an anti-viral agent where the anti-viral agent is associated with the immunostimulatory RNA oligonucleotide. The composition includes a microparticle housing the immunostimulatory RNA oligonucleotide and the anti-viral agent. The composition includes a liposome housing the immunostimulatory RNA oligonucleotide and the anti-viral agent. The anti-viral agent is one or more nucleotide analogs. The composition further comprises a nuclease susceptible site between the immunostimulatory RNA oligonucleotide and the anti-viral agent. The composition further comprises a pharmaceutical carrier. The... .9 ligand linked to an anti-viral agent. The TLR7/8/9 ligand is an immunostimulatory oligonucleotide. The TLR7/8/9 ligand is linked to the anti-viral agent directly or...
 ...immune-stimulating anti-viral composition. Screening for molecules containing an anti-viral agent and an immunostimulatory oligonucleotide that have anti-viral activity, comprises isolating immune cells from a virus-infected patient... ..are cultured. Treating cancer comprises administering to a subject having cancer a composition of an immunostimulatory oligonucleotide and an anti-viral agent in an amount to treat the cancer. The anti-viral agent is linked to the immunostimulatory oligonucleotide. The anti-viral agent is ribavirin. The immunostimulatory oligonucleotide is an RNA oligonucleotide or a DNA oligonucleotide, where the DNA oligonucleotide is an... ..bacterial infection comprises administering to a subject having a bacterial infection a composition of an immunostimulatory oligonucleotide and an anti-viral agent in an amount to treat the bacterial infection. ACTIVITY...
 E.C. Numbers:
 Descriptors: pharmaceutical comp., immunostimulatory oligonucleotide, appl. cancer, virus, bacterium infection therapy cytostatic virucide hepatotropic antiinflammatory tumor (27, 26)

22/3,K/6 (Item 5 from file: 357) Links
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0443997 DBA Accession No.: 2008-02194 PATENT

Obtaining immunoglobulin Y antibodies useful for treating e.g. diarrhoea involves generating antibodies by immunizing avian organisms with composition comprising antigens, and contacting with different antibodies involving immunoglobulin Y antibody for prognosing and treating diarrhea, dysentery, cholera, Streptococcus mutans serotype c infection, cystic fibrosis and upper respiratory infection

Author: LARSEN J B

Patent Assignee: BEIERHOLM HOLDING APS JANUS 2007

Patent Number: WO 200779755 Patent Date: 20070719 WPI Accession No.: 2008-B14418 (200807)

Priority Application Number: DK 200654 Application Date: 20060112

National Application Number: WO 2007DK18 Application Date: 20070112

Language: English

Abstract: ...thioether bonds, single carbon bonds, double carbon bonds, triple carbon bonds, disulfide bonds, sulfide bonds, phosphodiester bonds, oxime bonds, imine bonds, and/or imide bonds; and the chemical moiety does not... ..thioether bonds, single carbon bonds, double carbon bonds, triple carbon bonds, disulfide bonds, sulfide bonds, phosphodiester bonds, oxime bonds, imine bonds, and/or imide bonds. The bonds joining individual peptide residues... ..to self organize into liposomes), OM-174 (lipid A derivative), CpG motifs (synthetic oligonucleotides containing immunostimulatory CpG motifs), modified bacterial toxins, LT and CT, with non-toxic adjuvant effects, Endogenous human... ..acylation of conserved lysine residues with a biotin appendage) and/or e.g. glutamylation (covalent linkage of glutamic acid residues to tubulin and some other proteins) and/or e.g. glycylation (covalent linkage of one to more than 40 glycine residues to the tubulin C-terminal tail) and... ..include modifications by the addition of other proteins or peptides such as ISGylation (the covalent linkage to the ISG 15 protein (Interferon-Stimulated Gene 15)) and/or SUMOylation (the covalent linkage to the SUMO protein

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(Small Ubiquitin-related Modifier)) and/or ubiquitination (the covalent linkage to the protein ubiquitin); or change of the chemical nature of amino acids, such as... ..acid or asparagine to aspartic acid); or structural changes such as disulfide bridges (the covalent linkage of two cysteine amino acids) and/or proteolytic cleavage (cleavage of a protein at a peptide bond). The primary and secondary antigens may differ in peptide linkage by specific linkers forming di-, tri-, tetra-, penta-, hexa-, hepta-, octa-, nona- or deca-polypeptides...
E.C. Numbers:

22/3,K/7 (Item 6 from file: 357) Links

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0426609 DBA Accession No.: 2007-12547 PATENT

New immunostimulatory oligonucleotides for generating immune response for treating or preventing e.g. cancer, autoimmune disorder, airway inflammation, inflammatory disorders, skin disorders, allergy and asthma involving vector-mediated gene transfer and expression in host cell for use in cancer, autoimmune disorder, airway inflammation, inflammatory disorder, skin disorder, allergy and asthma therapy

Author: AGRAWAL S; KANDIMALLA E; YU D; BHAGAT L

Patent Assignee: IDERA PHARM INC 2007

Patent Number: US 20070093439 Patent Date: 20070426 WPI Accession No.: 2007-360722 (200734)

Priority Application Number: US 257769 Application Date: 20051025

National Application Number: US 257769 Application Date: 20051025

Language: English

New immunostimulatory oligonucleotides for generating immune response for treating or preventing e.g. cancer, autoimmune disorder, airway...

Abstract: DERWENT ABSTRACT: NOVELTY - Immunostimulatory oligonucleotides are new.

DETAILED DESCRIPTION - Immunostimulatory oligonucleotides of formulae

5'-TGTCR'TTCTC-X-CTCTTR'CTGT-5' (Ia), 5'-GTCR'TTCTC-X... ..5' (Il), are new.

R=2'-deoxy-7-deazaguanosine; R'=arabinoguanosine; X=glycerol linker;

o=phosphodiester linkage. An INDEPENDENT CLAIM is also included for a pharmaceutical composition (C1) comprising: the immunostimulatory oligonucleotide and a carrier.

WIDER DISCLOSURE - Also disclosed is an immunostimulatory agent comprising greater than or equal to 2 oligonucleotide branches linked together, of formula 5'-(N...

...sugar (all optionally covalently linked to a non-nucleotidic linker); p=natural or modified internucleoside linkage; Y=cytosine, 5-hydroxycytosine,

N4-alkyl-cytosine, 4-thiouracil, other non-natural pyrimidine nucleoside, or...

...antigen, allergen, chemotherapeutic agent or adjuvant. Preparation (disclosed):

No general method for preparation of the immunostimulatory oligonucleotides is

given. ACTIVITY - Cytostatic; Immunostimulant; Immunosuppressive; Respiratory-Gen.;

Antiinflammatory; Dermatological; Antiallergic; Antiasthmatic; Antimicrobial. An...

...to obtain the blood level of the oligonucleotide of (0.0001 - 10) µM. ADVANTAGE

- The immunostimulatory oligonucleotides are less expensive to make than the existing immunostimulatory oligonucleotides; such as CpG dinucleotide containing oligonucleotides, and comprise short oligonucleotide-based agents that are...

E.C. Numbers:

Descriptors: recombinant immunostimulatory oligonucleotide prep., isol., vector-mediated gene transfer, expression in host cell, oligonucleotide, appl., cancer, autoimmune...

22/3,K/8 (Item 7 from file: 357) Links

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0424351 DBA Accession No.: 2007-10289 PATENT

New composition comprises double-stranded short interfering ribonucleic acid (siRNA), useful for treating cancer, infectious diseases, autoimmune diseases, transplant rejection, or allergy or asthma sense and antisense ds short interfering RNA for RNA interference and cancer, infectious disease, autoimmune disease, transplant rejection, allergy or asthma gene therapy

CpGinternucleotidelinkage.txt

Author: UHLMANN E; JURK M; VOLLMER J; SCHETTER C; WEBER M

Patent Assignee: COLEY PHARM GMBH; QIAGEN GMBH 2007

Patent Number: WO 200731877 Patent Date: 20070322 WPI Accession No.: 2007-283939 (200727)

Priority Application Number: US 717597 Application Date: 20050916

National Application Number: WO 2006IB3356 Application Date: 20060915

Language: English

Abstract: ...O-methyl nucleotide, is new. DETAILED DESCRIPTION - INDEPENDENT CLAIMS are: (1) a method for reducing immunostimulatory potential of a double-stranded siRNA, the siRNA having a sense strand and an antisense... ...modification at the 3'end of the sense strand. Preferably, the sense strand has a phosphodiester backbone. The sense strand has a stabilized backbone comprising at least one stabilized internucleotide linkage selected from thioformacetal, phosphorothioate, methylphosphonate, boranophosphonate, or formacetate. Preferred Method: Reducing immunostimulatory potential of a double-stranded siRNA, the siRNA having a sense strand and an antisense... ...biological data given. MECHANISM OF ACTION - Gene Therapy. USE - The composition is useful for reducing immunostimulatory potential of a double-stranded siRNA, and for reducing expression of a gene having a...

E.C. Numbers:

Descriptors: sense, antisense ds short interfering RNA, 2' modification, locked nucleic acid, 2'-O-methyl nucleotide, phosphodiester backbone, appl. RNA interference, cancer, infectious disease, autoimmune disease, transplant rejection, allergy, asthma, pancreas cancer...

? d s

Set	Items	Description
S1	295	S E1-E25
S2	3	S S1 AND INTERNUCLEOTIDE
S3	26	S E2-E4
S4	2	S S3 AND INTERNUCLEOTIDE
S5	19	AU='VOLLMER, JORG' FROM 5, 6, 24, 34, 40, 41, 45, 50, 65, 71, 72, 73, 76, 98, 103, 136, 143, 144, 154, 155, 156, 162, 172, 305, 369, 370, 393, 399, 434, 28, 35, 44, 91, 110, 135, 164, 185, 357, 391, 467, 8, 99, 266, 315, 358, 138, 149, 159, 444
S6	1	S S5 AND INTERNUCLEOTIDE
S7	562	S E17-E18
S8	4	S S7 AND INTERNUCLEOTIDE
S9	63	S E1-E4
S10	0	S S9 AND INTERNUCLEOTIDE
S11	63	S E1-E3
S12	0	S S11 AND INTERNUCLEOTIDE
S13	12	S S11 AND PHOSPHO?
S14	165	S E1-E9
S15	1	S S14 AND INTERNUCLEOTIDE
S16	2	S E1-E3
S17	0	S (PHOSPHO? AND (INTERNUCLEOTIDE ADJ LINKAGE) AND STABILIZE AND IMMUNOSTIMULATORY)
S18	0	S (PHOSPHO? AND (INTERNUCLEOTIDE(W)LINKAGE) AND STABILIZE AND IMMUNOSTIMULATORY)
S19	0	S (IMMUNOSTIMULATORY AND (NUCLEOTIDE(W)LINKAGE) AND MODIF? AND STABIL?)
S20	236	S IMMUNOSTIMULATORY AND LINKAGE
S21	19	S S20 AND PHOSPHODIESTER
S22	19	RD (unique items)